repository database along with the time and date that said command was received from the user;

fourth computer readable program code means for causing the computer to convert said command from a format understandable by the user using said GUI to a format understandable by an onboard unit located on said at least one vehicle;

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fifth computer readable program code means for causing the computer to send said command, via a wireless mobile communications system, in said format understandable by said onboard unit located on said at least one vehicle, thereby causing said at least one vehicle parameter to be read or changed;

sixth computer readable program code means for causing the computer to receive an acknowledgment of said command from said onboard unit, via said wireless mobile communications system; and

seventh computer readable program code means for causing the computer to store said acknowledgment in said repository database so that the user may later retrieve said acknowledgment using said GUI;

said computer program product allows the user to perform total fleet logistics via said GUI interface by facilitating vehicle parameter changes, vehicle health tracking, and receipt of vehicle maintenance need indications, thus eliminating the need to physically bring vehicles within the fleet to a repair, maintenance or configuration facility.

REMARKS

Reconsideration and allowance are respectfully requested. Claims 1-12 were rejected by the Examiner. Applicants have amended claims 1-4, 6, 9-10, and 12 and

cancelled claims 5, 7-8 and 11 without prejudice. Consequently, claims 1-4, 6, 9-10, and 12 are pending upon entry of this Amendment. No new matter has been added.

Applicant has made various changes throughout the specification and claims to correct minor informalities without substantively affecting the disclosure or the claim scope. No new matter has been added through these changes. Entry is therefore respectfully requested.

§ 112 rejection

Claims 1-8 and 11 were rejected under 35 U.S.C. § 112, second paragraph as being indefinite. Applicants have cancelled claims 5, 7-8 and 11 without prejudice, rendering the rejection of those claims moot. Applicants have corrected the antecedent basis issues helpfully noted by the Examiner in the remaining pending claims to obviate the rejection. Withdrawal of the rejection is therefore respectfully requested.

Claim 7 was rejected under 35 U.S.C. § 112, first paragraph as being non-enabling. Applicants have cancelled claim 7 without prejudice, rendering the rejection moot. Withdrawal of the rejection is therefore respectfully requested.

§ 103 rejections

Claims 1-3, 5-9, and 11-12 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,815,071 to Doyle ("Doyle") in view of U.S. Patent No. 5,619,412 to Hapka ("Hapka"). Applicants have cancelled claims 5, 7 and 11 without prejudice, rendering the rejection of those claims moot. Applicants

respectfully traverse this rejection with respect to the remaining claims.

The Office Action admitted that Doyle and Hapka does not disclose a communication means that includes the Internet, but asserted that "it would have been obvious...to use the Internet in the communication means because the Internet provides an inexpensive communication means" as allegedly taught in Apsell (p. 6). Applicants respectfully disagree.

First, the Office Action asserted that Doyle teaches "an application server which provides the user with a graphical user interface in order to send and receive data from each of the one or more vehicles (18)" (p. 4). Applicants respectfully disagrees. The central control station 18 in Doyle only receives data and does not transmit any data to any of the vehicles. Any parameter changes are conducted by changing a parameter within the central control station and waiting for each vehicle to transmit a message packet corresponding to the parameter (col. 6, lines 18-24); an error condition results if the message packet does not match the parameter in the central control station (col. 5, lines 47-67). In the embodiment highlighted by the Office Action, however, the central control station itself acts only as a receiver and does not send any data to the vehicles (col. 6, lines 24-46).

Although Doyle does mention modifying parameters from the base station (col. 7, lines 1-45), Doyle does not do this via an onboard unit server that converts data understandable by a user to data understandable by an onboard unit. The central control station 18 cannot be considered the same as the claimed onboard unit server because Doyle teaches converting commands in the mobile communications terminal on the vehicle itself (col. 7,

lines 26-32). Doyle does not even recognize the possibility of centralizing data conversion in an onboard unit server.

Adding Hapka to Doyle still fails to suggest the claimed invention because Hapka also fails to teach the claimed onboard unit server. Instead, Hapka simply teaches using translating software 32 in a "remote command interface section 35" that is a part of the onboard equipment (see, e.g., Figure 1, which disposes the translation software between the onboard communications module 7 and the engine control device 9).

Moreover, the combination suggested by the Office Action does not remotely suggest a system and method that allows a user to perform "total fleet logistics" that "facilitate vehicle parameter changes, vehicle health tracking, and receipt of vehicle maintenance need indications" like the claimed invention because each reference focuses exclusively on limited vehicle operating characteristics. Doyle focuses solely on ECU settings while ignoring maintenance and tracking (col. 1, lines 27-63) and Hapka focuses narrowly on disabling an idle shutdown system (Abstract). Neither of these narrowly-focused references, either alone or in combination, could be taken to suggest a system that can perform "total fleet logistics" via two-way communication between a user and the on-board unit server via a GUI and the Internet.

Thus, the Office Action fails to establish a prima facie case of obviousness with respect to claims 1-3, 5-9, and 11-12, and withdrawal of the rejection is respectfully requested.

Claims 4 and 10 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Doyle in view of Hapka and further in view of U.S. Patent No. 6,292,724 to

Apsell et al. ("Apsell"). Applicants respectfully traverse this rejection.

Apsell does not teach using the Internet for two-way communication between its ground station and any vehicles. Instead, Apsell focuses only on using the Internet to carry information from transponders on fleet equipment to a ground station and then to an information processing center via the Internet (col. 3, lines 39 to col. 4, line 15). No data is transmitted to the fleet equipment, nor does Apsell even recognize any type of user interface that allows a user to send data to the equipment. Apsell allows users to only monitor fleet information, not transmit data to the fleet (col. 5, lines 50-67). Thus, at best, combining Doyle with Hapka and Apsell teaches a system that uses the Internet to communicate vehicle parameters for monitoring purposes without allowing the user to communicate to onboard units via an onboard unit server.

Further, Apsell addresses only providing vehicle information without allowing remote control of any vehicle condition (col. 2, line 53 to col. 3, line 20) and does not teach performing "total fleet logistics". The Office Action therefore fails to establish a prima facie case of obviousness with respect to claims 4 and 10, and withdrawal of the rejection is respectfully requested.

All objections and rejections having been addressed, it is respectfully submitted that the present application is in condition for allowance, and a Notice to that effect is earnestly solicited.

Any fees associated with the filing of this paper should be identified in any accompanying transmittal. However, if any additional fees are required, they may be

charged to Deposit Account 18-0013 in the name of Rader, Fishman & Grauer PLLC.

Respectfully submitted,

Dated: 4 February 2002

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CERTIFICATE OF MAILING

I hereby certify that the enclosed Amendment is being deposited with the United States Postal Service as first class mail, postage prepaid, in an envelope addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231 on this 4th day of February, 2002.

Leslie Wang
Leslie Wang

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MARKED UP VERSION OF SPECIFICATION

Page 18, Lines 3-14:

Referring to **FIG. 4A**, a "set alert" GUI screen [410] 400 with representative data, according to an embodiment of the present invention, is shown. Screen 400 includes a column 402 labeled "Vehicle Unit ID" which indicates the vehicles within a fleet the user 102 has previously selected to receive alerts for. Screen 400 includes a column 404 labeled "Description" which indicates the type of vehicle 128 corresponding the Vehicle Unit ID in column 402. Screen 400 also includes a column 406 labeled "T. Codes" which is a check box the user 102 can select to indicate that they wish to track alert codes for all available parameters within a specific vehicle 128. Lastly, screen 400 includes a column 408 labeled "Tamper" which is a check box the user 102 can select to indicate whether they wish to track whether any parameter within a specific vehicle 128 has been physically tampered with.

Page 18, Lines 15-22:

Referring to [**FIG. 4B**] **FIG. 4B-D**, a "view alert" GUI screen 410 with representative data, according to an embodiment of the present invention, is shown. Screen 410 includes a column 412 labeled "Reading Date/Time" which indicates the actual date and time a particular alert was generated for a particular vehicle specified in a column 414 labeled "Vehicle ID." In a column 416, the parameter name (e.g., vehicle speed limit) for which the alert was generated is displayed. Screen 410 also includes a column 418 labeled "Alert Value," where a description of the alter is displayed.

Page 18, Lines 23-29

Referring to **[FIG. 5A]** **FIG. 5A-5B**, a "select parameter" GUI screen 500, according to an embodiment of the present invention, is shown. Screen 500 includes four categories 502a-d of parameters a user 102 may select. Within each category 502, there are specific vehicle parameters 504a-d that the user 102 may choose from. Selected parameters 504 505, 506, 507 or categories of parameters 502 will result in the TFL system 100 system obtaining these parameter readings from each of the vehicles 128 that the user 102 has previously selected.

Page 18-19, Lines 30-31 and 1-13:

Referring to **[FIG. 5B]** **FIG. 5C-5E**, a "select parameter transactions" GUI screen 510 with representative data, according to an embodiment of the present invention, is shown. Screen 510 includes a column 512 labeled "Transaction Description." This column indicates the names of the different transactions. created by one or more users 102 which manage the same fleet of vehicles. In an embodiment of the present invention, a "transaction" is a section of different parameter categories 502 and/or specific vehicle parameters 504 selected by a user 102 using screen 500 and saved in the TFL system 100 using a "transaction" name shown in column 512 of screen 510. A column 513 indicates the ID (i.e., login name) of the particular user 102 which created the transaction. A column 514 indicates the date that the user 102 created the transaction. A column 516 labeled "Param Profile Requested" indicates the category 502 of parameters that the user 102 selected in GUI screen 500 for the corresponding transaction. A column 518 allows the user

102 to select the transactions they would like to view for the specific vehicles 128 previously selected.

Page 19, Lines 14-21:

Referring to **[FIG. 5C]** **FIG. 5F-5G**, a "view parameter results" GUI screen 520, according to an embodiment of the present invention, is shown. Screen 520 includes a column 522 labeled "Vehicle Unit ID" which indicates the vehicles within a fleet the user 102 has previously selected to receive parameter readings from. Screen 520 also includes several parameter reading columns 524 which indicate the parameter values read from the selected vehicles 128 and correspond to the transaction selected by a user 102 using the select buttons in column 518 on screen 510.

Page 19, Lines 22-31, and Page 20, Lines 1-2:

Referring to **[FIG. 6A]** **FIG. 6A-6B**, an "enter parameter values for reprogramming" GUI screen 600, according to an embodiment of the present invention, is shown. Screen 600 includes a column 602 labeled "Vehicle Unit ID" which indicates the vehicles within a fleet user 102 has previously selected to reprogram. (See control flow 300 described above with reference to **FIG. 3**.) Screen 600 includes a column 604 labeled "Description" which indicates the type of vehicle 128 corresponding the Vehicle Unit ID in column 602. Screen 600 also includes a column 606 labeled "Current Setting" which indicates the current value of the previously selected parameter that user 102 desires to reprogram (i.e., change). Lastly, screen 600 includes a column 608 labeled "New Setting" which is an input box where the user can enter a new value for the previously selected vehicle 128 parameter.

Page 20, Lines 3-16:

Referring to **[FIG. 6B]** **FIG. 6B-6C**, a "view reprogramming results" GUI screen 610, according to an embodiment of the present invention, is shown. Screen 610 includes a column 612 labeled "Vehicle" which indicates the vehicles 132 within a fleet the user 102 has previously selected to reprogram. A column 614 indicates the name of the previously selected vehicle parameter for which status information is now being viewed by user 102. A column 616 indicates the date and time that the user 102 submitted the reprogramming request using screen 600. A column 618 labeled "Current" indicates the present value (at last reading and presently stored in repository 116) for the corresponding vehicle parameter shown in column 614. A column 620 labeled "Requested" indicates the new reprogrammed value requested by user 102 using column 608 of screen 600. Screen 610 also includes a column 622 labeled "Status" which indicates the current status (as read from the vehicle 128) of the reprogramming command sent by the TFL system 100.

Page 21, Lines 15-17:

Computer system 700 can include a display interface [705] 702 that forwards graphics, text, and other data from the communication infrastructure [702] 706 (or from a frame buffer now shown) for display on the display unit 730.

MARKED-UP VERSION OF CLAIMS

1. (Once amended) A system for allowing a user to perform remote vehicle diagnostics, vehicle monitoring, vehicle configuration and vehicle reprogramming for one or more vehicles, comprising:

(A) an onboard unit coupled to ~~the~~ a data bus of the one or more vehicles;

(B) an application server which provides the user with a graphical user interface (GUI) in order to send and receive data from each of the one or more vehicles;

(C) a repository database, accessible via said application server, which stores information related to the one or more vehicles;

(D) an onboard unit server, coupled to said application server, which contains means to convert data between a format understandable by the user using said GUI, and a format understandable by said onboard unit coupled to the data bus of the one or more vehicles; and

(E) a communications means, coupled ~~to~~ between said onboard unit server and said onboard units, for handling communications between said onboard unit server and said onboard units located on the one or more vehicles;

~~whereby~~ wherein said system allows the user to perform total fleet logistics via said GUI interface by facilitating vehicle parameter changes, vehicle health tracking, and receipt of vehicle maintenance need indications, thus eliminating ~~the~~ a need to physically bring the one or more vehicles to a repair, maintenance, or configuration facility.

2. (Once amended) The system of claim 1, wherein the one or more vehicles includes ~~a combination of any of~~ at least one of the group consisting of: ~~the following:~~

(i) passenger cars;
(ii) light trucks;
(iii) vans; and
(iv) heavy trucks.

3. (Once amended) The system of claim 1, wherein said format understandable by said onboard unit coupled to the data bus of the one or more vehicles is binary.

4. (Once amended) The system of claim 1, wherein at least a first portion of said communications means includes the ~~global~~ Internet.

Please cancel claim 5 without prejudice.

6. (Once amended) A system for a vehicle onboard unit that allows a user to perform remote vehicle diagnostics, vehicle monitoring, vehicle configuration and vehicle reprogramming, comprising:

(A) a central processing unit (CPU);

(B) user input/output (I/O) channel ports for receiving communications from the user;

(C) a first application program interface means, executing on said CPU, for extracting a command from said communications received by said user I/O channel ports, wherein said command includes information specifying a vehicle and at least one vehicle parameter;

(D) vehicle input/output (I/O) channel ports for receiving and sending communications to a vehicle data bus located on said vehicle specified by said command;

(E) a second application program interface means, executing on said CPU, for communicating said command,

via said vehicle I/O channel ports, to said vehicle data bus thereby causing said at least one vehicle parameter to be read or changed;

~~whereby~~ wherein said system allows the user to perform total fleet logistics via said GUI interface by facilitating vehicle parameter changes, vehicle health tracking, and receipt of vehicle maintenance need indications, thus eliminating ~~the~~ a need to physically bring said vehicle to a repair, maintenance or configuration facility.

Please cancel claims 7 and 8 without prejudice.

9. (Once amended) A method for allowing a user to perform remote diagnostics, monitoring, configuring, and reprogramming for a fleet of vehicles, comprising the steps of:

(1) accessing a repository database in order to provide the user with a list of specific vehicles within the fleet of vehicles and a list of associated vehicle parameters;

(2) receiving, via a graphical user interface (GUI), a command from the user, wherein said command includes information specifying at least one vehicle from said list of vehicles and one vehicle parameter from said list of associated vehicle parameters.

(3) storing said command in said repository database along with the time and date that said command was received from the user;

(4) converting said command from a format understandable by the user using said GUI to a format

understandable by an onboard unit located on said at least one vehicle;

(5) sending said command, via a wireless mobile communications system, in said format understandable by said onboard unit located on said at least one vehicle, thereby causing said at least one vehicle parameter to be read or changed;

(6) receiving an acknowledgment of said command from said onboard unit, via said wireless mobile communications system; and

(7)storing said acknowledgment in said repository database so that the user may later retrieve said acknowledgment using said GUI;

~~whereby~~ wherein said method allows the user to perform total fleet logistics via said GUI interface by facilitating vehicle parameter changes, vehicle health tracking, and receipt of vehicle maintenance need indications, thus eliminating the need to physically bring vehicles within the fleet to a repair, maintenance, or configuration facility.

10. (Once amended) The method of claim 9, wherein at least a portion of said GUI is provided to the user via the ~~global~~ Internet.

Please cancel claim 11 without prejudice.

12. (Once amended) A computer program product comprising a computer usable medium having control logic stored therein for causing a computer, to provide remote

diagnostics, monitoring, configuring and reprogramming for a fleet of vehicles, said control logic comprising:

first computer readable program code means for causing the computer to access a repository database in order to provide the user with a list of specific vehicles within the fleet of vehicles and a list of associated vehicle parameters;

second computer readable program code means for causing the computer to receive, via a graphical user interface (GUI), a command from the user, wherein said command includes information specifying at least one vehicle from said list of vehicles and one vehicle parameter from said list of associated vehicle parameters;

third computer readable program code means for causing the computer to store said command in said repository database along with the time and date that said command was received from the user;

fourth computer readable program code means for causing the computer to convert said command from a format understandable by the user using said GUI to a format understandable by an onboard unit located on said at least one vehicle;

fifth computer readable program code means for causing the computer to send said command, via a wireless mobile communications system, in said format understandable by said onboard unit located on said at least one vehicle, thereby causing said at least one vehicle parameter to be read or changed;

sixth computer readable program code means for causing the computer to receive an acknowledgment of said

command from said onboard unit, via said wireless mobile communications system; and

seventh computer readable program code means for causing the computer to store said acknowledgment in said repository database so that the user may later retrieve said acknowledgment using said GUI;

~~whereby~~ said computer program product allows the user to perform total fleet logistics via said GUI interface by facilitating vehicle parameter changes, vehicle health tracking, and receipt of vehicle maintenance need indications, thus eliminating the need to physically bring vehicles within the fleet to a repair, maintenance or configuration facility.

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